

AMENDMENTS TO THE CLAIMS

Please amend the claims as shown below. A complete listing of all pending claims is presented.

1. (canceled)

2. (previously presented) An information recording disc including:

a signal recording layer for use in an information recording/reproducing apparatus having a light source for emitting a light flux and a focusing element for focusing the light flux to be applied to the signal recording layer; and

a first dielectric layer between said signal recording layer and said focusing element,

wherein the distance between the focusing element and a surface portion facing to the focusing element is not greater than a wavelength of the light flux,

wherein the surface portion facing to the focusing element is coated with an anti-reflection coating film,

wherein a first dielectric film is on the signal recording layer, and

the anti-reflection coating layer is on the first dielectric film, so as to prevent reflection of the light flux incident into the first dielectric film.

3. (original) The information recording disc as claimed in Claim 2, wherein the anti-reflection coating film is formed by three or more layers of dielectric films.

4. (original) The information recording disc as claimed in Claim 2, wherein a first dielectric film is formed on the signal recording layer, and

the anti-reflection coating layer is formed on the first dielectric film, so as to prevent reflection of the light flux incident into the first dielectric film.

5. (previously presented) The information recording disc as claimed in claim 2, wherein a second dielectric film is on the opposite side of the signal recording layer not facing the focusing element and a reflection film is at a lower side of the second dielectric film, and

wherein the first dielectric film, the signal recording layer, the second dielectric film, and the reflection film generates an enhancement effect for a component of the light flux incident into the signal recording layer which component is in the normal line direction against the signal recording layer.

6. (original) The information recording disc as claimed in Claim 4, wherein the anti-reflection coating layer has a thickness greater than the thickness of the signal recording layer.

7. (original) The information recording disc as claimed in Claim 4, wherein the anti-reflection coating layer has a thickness not less than 100 nm.

8. (previously presented) The information recording disc as claimed in Claim 4, wherein the surface portion is smooth and flat.

9. (previously presented) An information recording/reproducing apparatus comprising:

a rotation mechanism for holding and rotating an information recording disc;

a substrate;

a reflection film, said reflection film being between said signal recording layer and said substrate;

a second dielectric layer, said second dielectric layer being between said signal recording layer and said reflection film;

a light source; and

a focusing element for focusing a light flux emitted from the light source so as to be applied to a signal recording layer of the information recording disc;

wherein the information recording disc is used in such a manner that a distance between the focusing element and the surface portion facing to this focusing element is not greater than a wavelength of the light flux, and the information recording disc includes an anti-reflection coating film on the surface portion facing to the focusing element,

the information recording disc includes a first dielectric film on the signal recording layer, and

the anti-reflection coating layer of the information recording disc is on the first dielectric film, so as to prevent reflection of the light flux incident into the first dielectric film.

10. (original) The information recording/reproducing apparatus as claimed in claim 9, wherein the anti-reflection coating film of the information recording disc is formed by three or more layers of dielectric films.

11. (original) The information recording/reproducing apparatus as claimed in Claim 9, wherein the information recording disc includes a first dielectric film formed on the signal recording layer, and

the anti-reflection coating layer of the information recording disc is formed on the first dielectric film, so as to prevent reflection of the light flux incident into the first dielectric film.

12. (previously presented) The information recording/reproducing apparatus as claimed in claim 9, wherein the information recording disc includes a second dielectric film on the opposite side of the signal recording layer not facing the focusing element and

a reflection film at a lower side of the second dielectric film, and

wherein the first dielectric film, the signal recording layer, the second dielectric film, and the reflection film generates an enhancement effect for a component of the light flux incident into the signal recording layer which component is in the normal line direction against the signal recording layer.

13. (original) The information recording/reproducing apparatus as claimed in Claim 11, wherein the anti-reflection coating layer of the information recording disc has a thickness greater than the thickness of the signal recording layer.

14. (original) The information recording/reproducing apparatus as claimed in Claim 11, wherein the anti-reflection coating layer of the information recording disc has a thickness not less than 100 nm.

15. (previously presented) The information recording/reproducing apparatus as claimed in Claim 11, wherein the surface portion of the information recording disc is smooth and flat.

16. (previously presented) The information recording disc as claimed in claim 2, wherein said anti-reflection coating film is between said signal recording layer and said first dielectric layer, said anti-reflection coating film including:

a third dielectric film between said signal recording layer and said focusing element;

a fourth dielectric film between said third dielectric film and said focusing element;

a fifth dielectric film between said fourth dielectric film and said focusing element.

17. (previously presented) The information recording disc as claimed in claim 16, wherein said fourth dielectric film is a SiN film.

18. (previously presented) The information recording/reproducing apparatus as claimed in claim 9, further comprising:

a first dielectric layer between said signal recording layer and said focusing element.

19. (Canceled)

20. (previously presented) The information recording/reproducing apparatus as claimed in claim 9, wherein said anti-reflection coating film is between said signal recording layer and said first dielectric film, said anti-reflection coating film including:

a third dielectric film between said signal recording layer and said focusing element;

a fourth dielectric film between said third dielectric film and said focusing element;

a fifth dielectric film between said fourth dielectric film and said focusing element.

21. (previously presented) The information recording/reproducing apparatus as claimed in claim 20, wherein said third dielectric film is a SiO₂ film.

22. (previously presented) The information recording/reproducing apparatus as claimed in claim 20, wherein said fourth dielectric film is a SiN film.

23. (previously presented) The information recording/reproducing apparatus as claimed in claim 20, wherein said fifth film is a SiO₂ film.

24. (previously presented) An information recording disc comprising:

a signal recording layer, a focusing element focusing a light flux onto said signal recording layer;

a first dielectric layer, said first dielectric layer being between said signal recording layer and said focusing element;

a substrate;

a reflection film, said reflection film being between said signal recording layer and said substrate;

a second dielectric layer, said second dielectric layer being between said signal recording layer and said reflection film;

an anti-reflection coating film, said anti-reflection coating film reducing reflection of said light flux incident into said first dielectric layer,

said anti-reflection coating film including:

a third dielectric film between said signal recording layer and said focusing element;

a fourth dielectric film between said third dielectric film and said focusing element;

a fifth dielectric film between said fourth dielectric film and said focusing element.

25. (previously presented) The information recording disc as claimed in claim 24, wherein an air gap is adjacent and in contact with said third anti-reflection coating film.

26. (previously presented) The information recording disc as claimed in claim 24, wherein said third anti-reflection coating film has a thickness of not less than approximately 100 nm.

27. (previously presented) The information recording disc as claimed in claim 24, wherein said third dielectric film is a SiO_2 film.

28. (previously presented) The information recording disc as claimed in claim 24, wherein said fourth dielectric film is a SiN film.

29. (previously presented) The information recording disc as claimed in claim 24, wherein said fifth film is a SiO_2 film.

30. (previously presented) The information recording disc as claimed in claim 24, wherein an outer surface of said anti-reflection coating film is SiO_2 ;

an air gap being between said anti-reflection coating film and said focusing element, said air gap being adjacent and in contact with said SiO_2 .

31. (previously presented) The information recording disc as claimed in claim 24, wherein said first dielectric layer is adjacent and in contact with said signal recording layer;

said anti-reflection coating film is adjacent and in contact with said first dielectric layer.

32. (previously presented) The information recording disc as claimed in claim 24, wherein said signal recording layer is $\text{Ge}_2\text{Sb}_2\text{Te}_5$.

33. (previously presented) The information recording disc as claimed in claim 24, wherein said signal recording layer is TbFeCo and GbFeCo.

34. (Canceled)

35. (previously presented) The information recording disc as claimed in claim 24, wherein:

said reflection film is a metal;

said first dielectric layer is a ZnS-SiO₂ film;

said second dielectric layer is a ZnS-SiO₂ film.

36. (previously presented) The information recording disc as claimed in claim 24, wherein:

said reflection film is a metal;

said first dielectric layer is a SiN film;

said second dielectric layer is a SiN film.

37. (previously presented) The information recording disc as claimed in claim 24, wherein said focusing element is a solid immersion lens.

38. (previously presented) The information recording disc as claimed in claim 37, wherein an air gap being between said anti-reflection coating film and said focusing element, said air gap having a width not greater than the wavelength of said light flux.

39. (cancelled)

40. (cancelled)

41. (cancelled)

42. (cancelled)

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51. (cancelled)

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